

WHAT IS CLAIMED IS:

1. A video combining method for superimposing a virtual image generated by a computer on the real world observed by a user, comprising the steps of:

- 5 inputting an image obtained by image sensing the real world;
- inputting position and orientation information of the user's view point;
- generating a virtual image based on said position
10 and orientation information;
- extracting a virtual image elimination area of said virtual image; and
- combining said virtual image with said image obtained by image sensing based on said virtual image
15 elimination area.

2. A video combining apparatus for superimposing a virtual image generated by a computer on the real world observed by a user, comprising:

- 20 image input unit adapted to input an image obtained by image sensing the real world;
- position and orientation information input unit adapted to input position and orientation information of the user's view point;
- 25 virtual image generation unit adapted to generate a virtual image based on said position and orientation information;

elimination area extraction unit adapted to
extract a virtual image elimination area of said
virtual image; and

combining unit adapted to combine said virtual
5 image with said image obtained by image sensing based
on said virtual image elimination area.

3. A video combining method for superimposing a
virtual image on a video image of the real world
10 observed by a user, comprising:

an image input step of inputting a video image of
the real world observed by the user;

a position and orientation information input step
of inputting position and orientation information of
15 the user's view point;

a virtual image generation step of generating a
virtual image based on said position and orientation
information;

a designated area detection step of detecting a
20 predetermined area designated by the user; and

a superimposition step of superimposing said
virtual image on said video image except a portion
corresponding to the area in the video image detected
at said designated area detection step.

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4. The video combining method according to claim 3,
wherein at said designated area detection step, the

area in the video image is detected from the video image obtained by image sensing.

5. The video combining method according to claim 4,
5 wherein at said designated area detection step, a marker provided in area designation means operated by the user, included in the video image obtained by image sensing, is detected, and the area in the video image is detected based on the position of the marker.

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6. The video combining method according to claim 3,
wherein at said designated area detection step, the area in the video image is detected based on position and orientation information of area designation means
15 operated by the user.

7. The video combining method according to claim 3,
wherein at said designated area detection step, the area in the video image is detected based on
20 information on an area surrounded with a particular color.

8. The video combining method according to claim 3,
wherein at said designated area detection step, the
25 area in the video image is detected based on information on a closed area formed by the user's hand.

9. A computer-readable medium holding program code to realize a video combining method for superimposing a virtual image generated by a computer on the real world observed by a user, by a computer, comprising:

- 5 process procedure code for inputting an image of the real world obtained by image sensing;
- process procedure code for inputting position and orientation information of the user's view point;
- process procedure code for generating a virtual
- 10 image based on the position and orientation information;
- process procedure code for extracting a virtual image elimination area; and
- process procedure code for combining said virtual
- 15 image with said image obtained by image sensing based on the information on said virtual image elimination area.

10. A computer-readable medium holding program code to

20 realize a video combining method for superimposing a virtual image on a video image of the real world observed by a user, by a computer, comprising:

- process procedure code for inputting a video image of the real world observed by the user obtained
- 25 by image sensing;
- process procedure code for inputting position and orientation information of the user's view point;

process procedure code for generating a virtual
image based on said position and orientation
information;

process procedure code for detecting a
5 predetermined area designated by the user; and

process procedure code for superimposing said
virtual image on said video image obtained by image
sensing except a portion corresponding to the area in
the video image detected at said detection process.

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